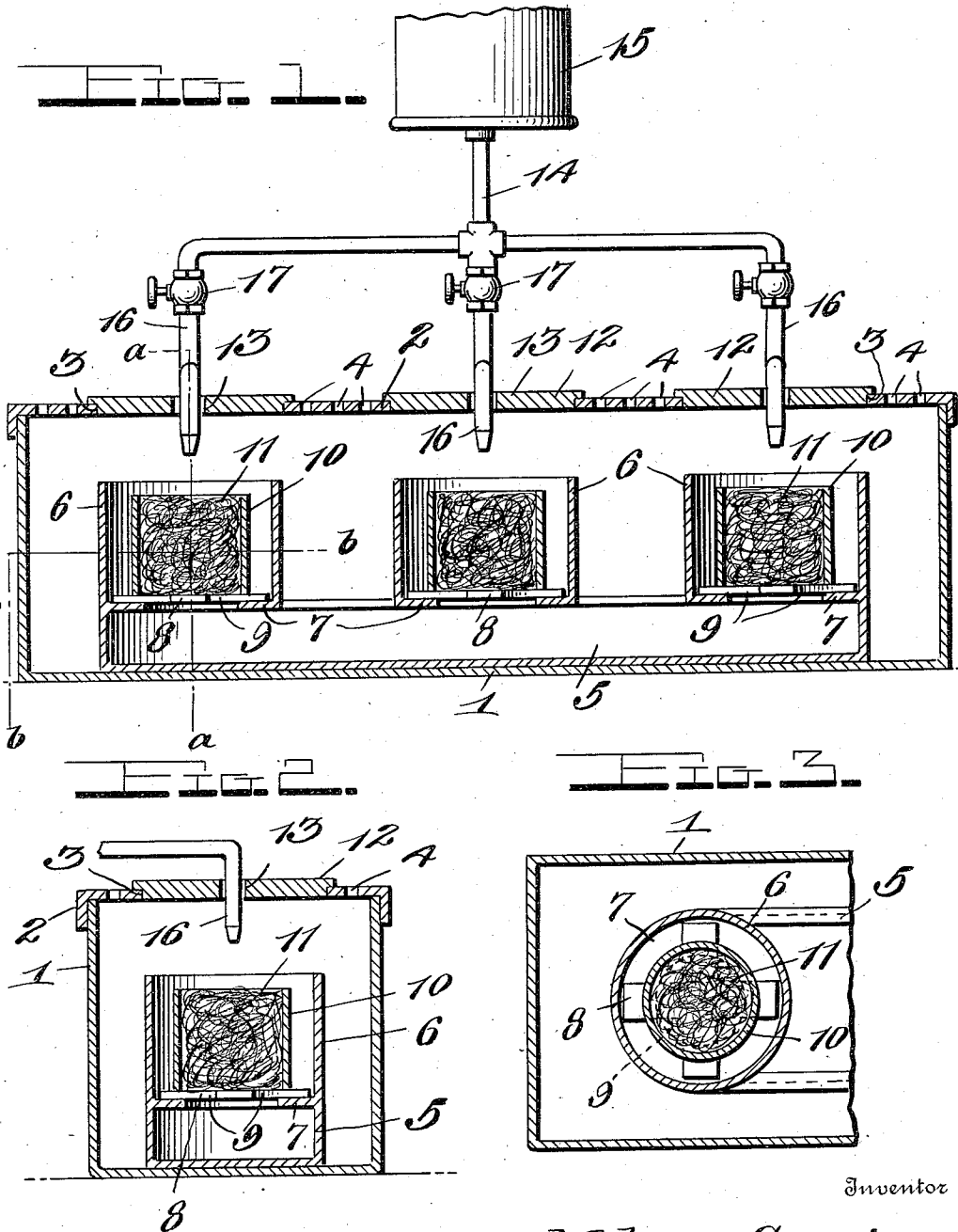


M. CARRIER.
OIL BURNER.

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1,019,130.

Patented Mar. 5, 1912.



Witnesses

Chas. L. Griesbauer.
H. L. M. Dwyer.

Inventor

Melissa Carrier,

By Watson E. Coleman,
Attorney

UNITED STATES PATENT OFFICE.

MELISSA CARRIER, OF BRIDGEPORT, NEBRASKA.

OIL-BURNER.

1,019,130.

Specification of Letters Patent.

Patented Mar. 5, 1912.

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To all whom it may concern:

Be it known that I, MELISSA CARRIER, a citizen of the United States, residing at Bridgeport, in the county of Morrill and State of Nebraska, have invented certain new and useful Improvements in Oil-Burners, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention is an improved oil burner especially adapted for burning crude oil and consists in the construction, combination and arrangement of devices hereinafter described and claimed.

15 In the accompanying drawings: Figure 1 is a vertical longitudinal sectional view of an oil burner constructed in accordance with my invention; Fig. 2 is a vertical transverse sectional view of the same on the plane indicated by the line *a-a* of Fig. 1; 20 and Fig. 3 is a detail horizontal sectional view of the same on the plane indicated by the line *b-b* of Fig. 1.

In the embodiment of the invention here 25 shown a frame or casing 1 is employed in which the burners are located and this frame or casing is provided with a cover 2 which has suitably spaced openings 3 and is also provided with perforations 4 to admit air to the interior of the casing or frame 30 and permit combustion of oil in the burners. I also, in accordance with my invention, provide a pan or tray 5 which forms the base of my burner or burners and on the 35 upper side of this pan and secured to and carried thereby is a series of suitably spaced outer cylindrical burner bodies 6 which are open at their upper and lower ends, are disposed below and concentric with the open- 40 ings 3 of the cover 2 and are each provided, near its base, with an inwardly extending flange 7. In the bottom of each outer burner body 6 is placed a removable support 8 which bears on the flange 7 and is 45 provided with suitable openings 9. On each of the said supports is placed an inner burner cup 10 which is open both at its upper end and at its lower end and is filled with asbestos or other suitable absorbent 50 and refractory material as at 11. The inner burner cups are spaced from and are disposed concentrically in the outer burner bodies 6.

55 The cover 2 is provided with lids 12 which are fitted in and removable from the openings 3 and each lid has a central open-

ing 13. A suitable feed pipe 14 leads from a suitable reservoir or tank 15 and is provided with branch feed arms 16, each of which is provided with a suitable controlling valve 17, the lower end of each branch feed pipe passing down through the opening 13 of one of the lids 12. Hence by appropriately turning the valves oil may be caused to drip from the branch feed pipes 16 on to the asbestos in the inner burner cups 10.

The operation of my improved burner is as follows: The asbestos in the inner burner cups is first saturated with oil and a suitable quantity of oil is fed to the pan or tray 5 and ignited therein and caused to heat the burners and to convert the oil in the asbestos fillers of the burners into gas, which, being mixed with the air supplied to the burners through the perforations 4, ignites and burns clearly and with little or no smoke. When the burners have thus been started the valves in the feed pipe are appropriately opened to cause the fillers of the burners to be supplied with oil to keep the burners in operation. The inner burner cups 10 being spaced from the outer burner bodies 6 and supported on the parts 8 which are provided with openings 9, flames from the pan pass between the walls of the burner bodies 6 and the inner burner cups 10 and serve to thoroughly heat them and convert the oil in the fillers into gas and after the burners have been started in operation the burner bodies form mixing chambers which serve to mix the air with the gas from the fillers of the burner cups so as to secure complete combustion of the gases and prevent the burners from smoking.

In practice, the casing 1 will be provided with a suitable flue to carry off the products of combustion. Owing to the fact that the inner burner cups are open at their lower ends as well as at their upper ends and to the further fact that said burner cups are merely placed on and are readily removable from the supports 8, which supports are also removable, the various parts of the burner may be readily cleaned and, moreover, the fillers may be readily pushed from the inner burner cups when they become clogged and foul and require to be renewed. Another advantage resulting from the construction of the inner burner cups with the open lower ends is that the flame from the pan or tray, when starting

the burners, is enabled to act directly on the bottoms of the fillers in the inner burner cup so as to greatly assist in initially heating the burners and their fillers to the required degree to convert the oil in the fillers into gas.

Having thus described my invention I claim:

1. In a burner of the class described, a base element, an outer burner body thereon open at its upper and lower ends, a supporting element in the lower portion of the outer burner body and removable therefrom and provided with openings, and an inner burner cup smaller than and disposed in the outer burner body and on the supporting element, the said inner burner cup being open at its upper and lower ends and being provided with a filler of absorbent refractory material.

2. In a burner of the class described, a base

element, an outer burner body thereon open at its upper and lower ends and provided with an inwardly extending supporting flange at its lower end, a supporting element in the lower portion of the outer burner body, supported by the said flange, removable from the outer burner body and provided with openings, and an inner burner cup smaller than and disposed in the outer burner body and on and removable from the supporting element, the said inner burner cup being open at its upper and lower ends and being provided with a filler of absorbent refractory material.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

MELISSA CARRIER.

Witnesses:

CHARLES LAMBERSON,
MARK SPANOGLE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."